

**Estate of Chemetco, Inc.**  
**Work Plan for Sales of Facility Assets –Pot Slag**  
**March 27, 2008**  
**Revised February 8, 2010**

**Facility Asset: Pot Slag (copper refining slag solids)**

**Purpose:**

The purpose of this revision of the Work Plan is to document the handling, packaging and shipping of approximately 150 metric tons of Pot Slag to a new purchaser, Kataman Metals, LLC (Kataman) , approved by the U.S. Bankruptcy Court, Southern District of Illinois.

**Purchaser:**

Since entering the Interim Order on September 16, 2008, the Estate of Chemetco, Inc. (Estate) has successfully shipped 130.4 metric tons of Pot Slag for recycling at Colonial Metals in Columbia, PA where they produce a wide variety of non-ferrous alloys for industry. The Pot Slag was shipped in covered dump trailers. On January 8, 2010, the U. S. Bankruptcy Court entered an order to sell 150 metric tonnes of Pot Slag to Kataman (presented as Attachment A) who had a higher bid than Colonial Metals. Kataman has contracted with Environmental Management Alternatives (EMA) of St. Louis to load and ship the Pot Slag to the same customer, Aurubis AG, that the Estate has shipped 2,262.7 metric tonnes of Cupro and it will be loaded and shipped in the same manner (i.e., bulk loaded into a plastic lined spill proof sea container, covered with plastic, and the doors sealed).

**Characterization of Material:**

Pot Slag is a metal bearing copper refining slag generated by Chemetco's copper smelting process. Pot Slag exists in a stockpile inside the NE corner of the Foundry Building above and below grade. Some of the Pot Slag below grade is covered with stormwater that will be pumped into the site's stormwater system. As the Pot Slag is removed from the NE corner of the Foundry Building the depression left will be back-filled with black slag to prevent an unsafe condition and the future accumulation of stormwater.

Pot Slag exists in sizes that range from fines to large bulk pieces as described below in the section on *Handling, Packaging and Shipping*. Pot Slag is very heavy, ~ 1.85 MT/cy.

Pot Slag has significant levels of economically viable non-ferrous metals as metal oxides: copper 20-40% by weight, zinc 5-15%, lead 5-15%, tin 5-15%, and nickel 3-6%. Silica dioxide, 25-35%, (amorphous) is the largest non-metal compound.

An MSDS for Pot Slag (copper refining slag) contains additional information and is presented as Attachment C.

**Regulatory Classifications:**

***RCRA:*** By-product

***USDOT:*** Determination to be made at time of loading based on the level of fines and the concentration of lead and cadmium as it relates to Marine Pollutants and then only applies if shipment is by vessel. Pot Slag are otherwise classified as follows:

***Shipment other than by vessel:*** NOT a USDOT Hazardous Substance.

***Shipment by vessel:*** Potentially a USDOT Hazardous Substance, Class 9, UN3077, Group III, "Environmentally Hazardous Substance, Solid, NOS (Copper Furnace Cleanup Solids-copper slag solids)" [Note: Classification triggered by potential marine pollutant limit for presence of high level of fines containing soluble lead, applicable only to shipment by vessels.]

### **Handling, Packaging and Shipping:**

**Shipping Container:** All Pot Slag will be shipped as bulk in spill proof sea containers that meet the USDOT and IMO transportation requirements.

**Preparation for Shipping:** EMA will use the open concrete area between the Cupro stockpile and the West Exit from the Foundry Building for stockpiling Pot Slag to be packaged and shipped. Any wet Pot Slag will be allowed to dry prior to packaging and shipping. A mini-excavator, a front end loader, and/or a skid loader will be used to remove the Pot Slag from the locations in the SW corner and the locations outside on the west side of the Foundry Building to the open concrete area.

**Loading and Shipping:** The spill proof ocean/freight container (sea container) will be parked at the west entrance to the Foundry Building but will not enter the building. Loading will be performed using a skid-steer loader or similar equipment to transport fines and smaller pieces of Pot Slag up a portable metal ramp into the plastic lined container with sealed doors. A small heavy-lift forklift or similar equipment will transport pieces too large and heavy for the skid-steer loader and place them strategically inside the container to maintain an even distribution of weight across the container. A front-end loader or similar equipment will be used to position Cupro in the stockpiles for loading by the skid-steer loader and/or forklift to insure that the stockpiles do not become unstable as Cupro is removed from the base. Upon completion of loading, plastic is overlapped and taped down and a bulk-head placed across the doorway.

**Bill of Lading:** Each shipment of Pot Slag will be accompanied by a commercial Bill of Lading that includes the net weight of the contents as determined using the Chemetco truck scales upon leaving the site less the tare weight, description of contents, van-trailer number, date of departure, and purchaser information.

### **Schedule**

Work is expected to be conducted from 7AM to 6PM, Monday-Friday but the Estate reserves the right to adjust the work schedule to accommodate shipping schedules. Depending on purchaser requirements, shipments of Pot Slag are expected to start within 2 weeks and take 4 to 5 days to complete.

### **Pollution Prevention**

**Decontamination:** All facility assets or the exterior of their containers going off-site will be decontaminated per the Estate's Decontamination Procedure. All decontamination residues will be managed according to RCRA. Tires on wheeled vehicles will be washed before going off-site.

**Spills and Release Cleanup:** Any spills or releases of Pot Slag outside the Foundry Building will be cleaned up each day using brooms, shovels or vacuum systems. A determination will be made as to whether the materials cleaned up can be shipped or will be containerized and handled as Wastes according to RCRA.

**Containment:** All sealed containers of Wastes, including Hazardous Waste, awaiting shipment will be temporarily stored on plastic in an isolated area inside the west end of the Tank House and will be managed according to RCRA.

**Fugitive Dust:** Water spray and/or misters will be used to control fugitive dust but limited in volume to prevent run-off.

### **Waste Management**

**Hazardous Waste:** The Estate expects to generate less than 100 lbs of hazardous waste as spill cleanup, debris (paper, plastic, cardboard, and wood), and contaminated PPE and filter elements. All wastes will be properly characterized, contained, labeled, handled, stored and manifested according to RCRA.

**Non-Hazardous Waste:** The Estate does not expect to generate any non-hazardous waste. If any non-hazardous waste is generated, it will be properly characterized, handled and disposed in accordance with RCRA.

### **Health & Safety**

**Hazards:** Pot Slag contains hazardous levels of non-ferrous metals and inorganic metal compounds, such as lead and nickel, as referred to in the Estate's MSDS-Pot Slag (copper refining slag solids), attached. Exposure to mineral dust is a concern due to the level of fines, <10%, and respirable dusts, < 1%, present as Pot Slag. Work around heavy and moving equipment is a safety hazard.

***Compliance:*** The Estate requires that all workers inside the Foundry Building and in contact with Pot Slag are required to comply with OSHA regulations for exposure to lead, cadmium and nickel, including wearing protective equipment such as hard hats, safety glasses or goggles, gloves, long sleeve shirt and long pants, boots, and respirator and are medically monitored for lead and cadmium exposure. All workers are also required to have current 40-hr HAZWOPER training certification.

**Security**

The Estate will provide 24-hr security monitoring of the site utilizing Estate personnel on work days, Monday thru Friday, and the use of its 24-hr security camera monitoring system. All work will be conducted during daylight hours, Monday thru Friday, or when Estate personnel are present for specially scheduled work on the weekends or holidays.

**Closure**

Upon completion of all work, the Estate will issue a Closure Report for this Work Plan with documentation on all shipments off-site including Pot Slag and Wastes.

Attachment A  
U. S. Bankruptcy Court Order for Sale to Kataman Metals, LLC

**Attachment B**  
**Kataman Metals LLC Recycling Letter**

Attachment C  
MSDS Pot Slag